



US006279508B1

(12) **United States Patent**
Marchant et al.

(10) **Patent No.:** **US 6,279,508 B1**
(45) **Date of Patent:** **Aug. 28, 2001**

(54) **PET WATERING FOUNTAIN**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/559,540**

(22) Filed: **Apr. 28, 2000**

Related U.S. Application Data

(60) Provisional application No. 60/162,066, filed on Oct. 28,
1999.

(51) **Int. Cl.⁷** **A01K 7/06**

(52) **U.S. Cl.** **119/75; 119/76; 119/62**

(58) **Field of Search** 119/75, 52.4, 53.5,
119/54, 55, 62, 76; 25/295; 4/624, 626;
239/29.5

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U.S. PATENT DOCUMENTS

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3,889,640 6/1975 Restall .
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4,633,816 1/1987 Ove et al. .
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Primary Examiner—Peter M. Poon

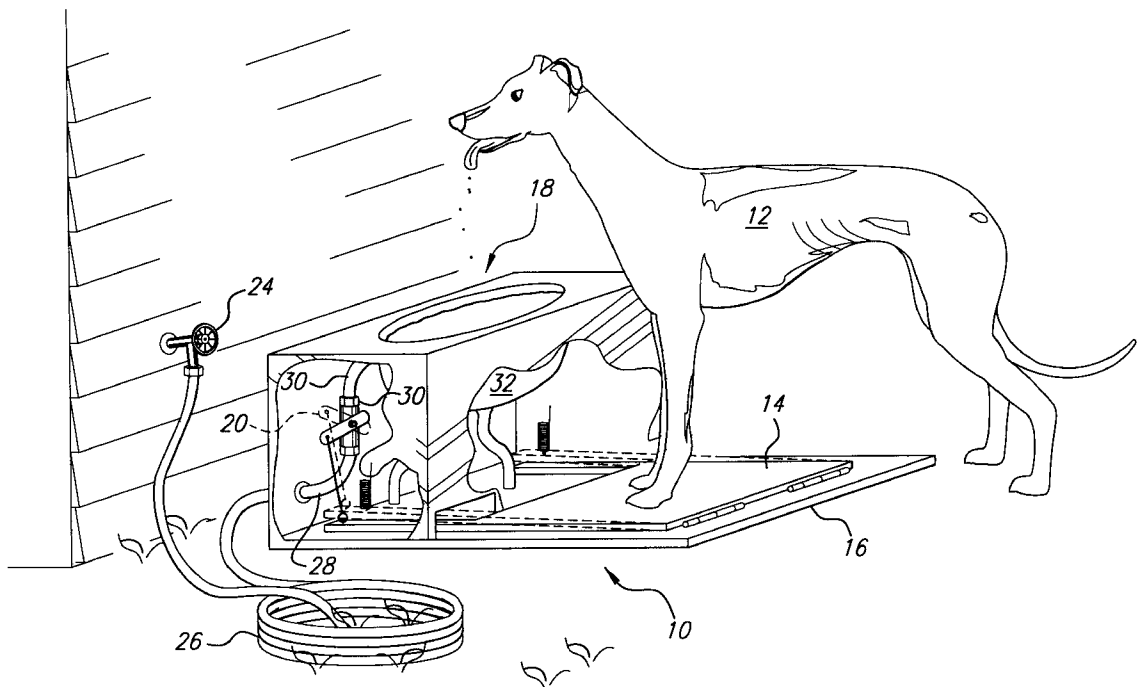
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(57) **ABSTRACT**

A pet watering fountain including a box-shaped housing, a water supplier, a hose, two pipes, a control valve unit (body), a helical or expansion spring (spring), a bowl, a drain, and a pedal. A thirsty dog walks onto the spring-biased pedal. The spring-biased pedal is then lowered to the floor of the housing which actuates a lever on the control valve unit. As a result, water flows from an outside hose bib into a garden hose, through a first pipe into a valve unit, then into a second pipe which fills into an elevated bowl.

10 Claims, 2 Drawing Sheets



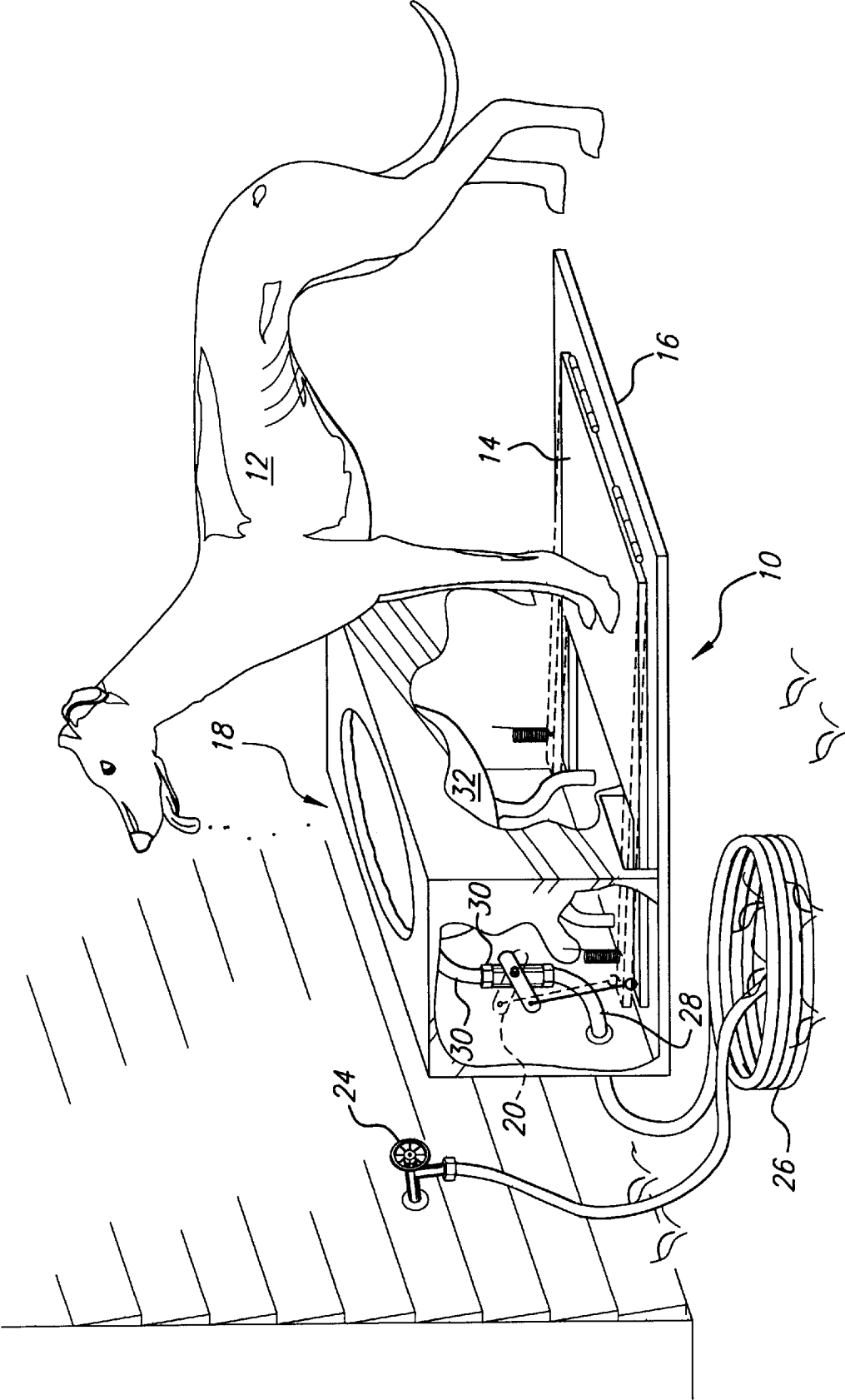


FIG. 1

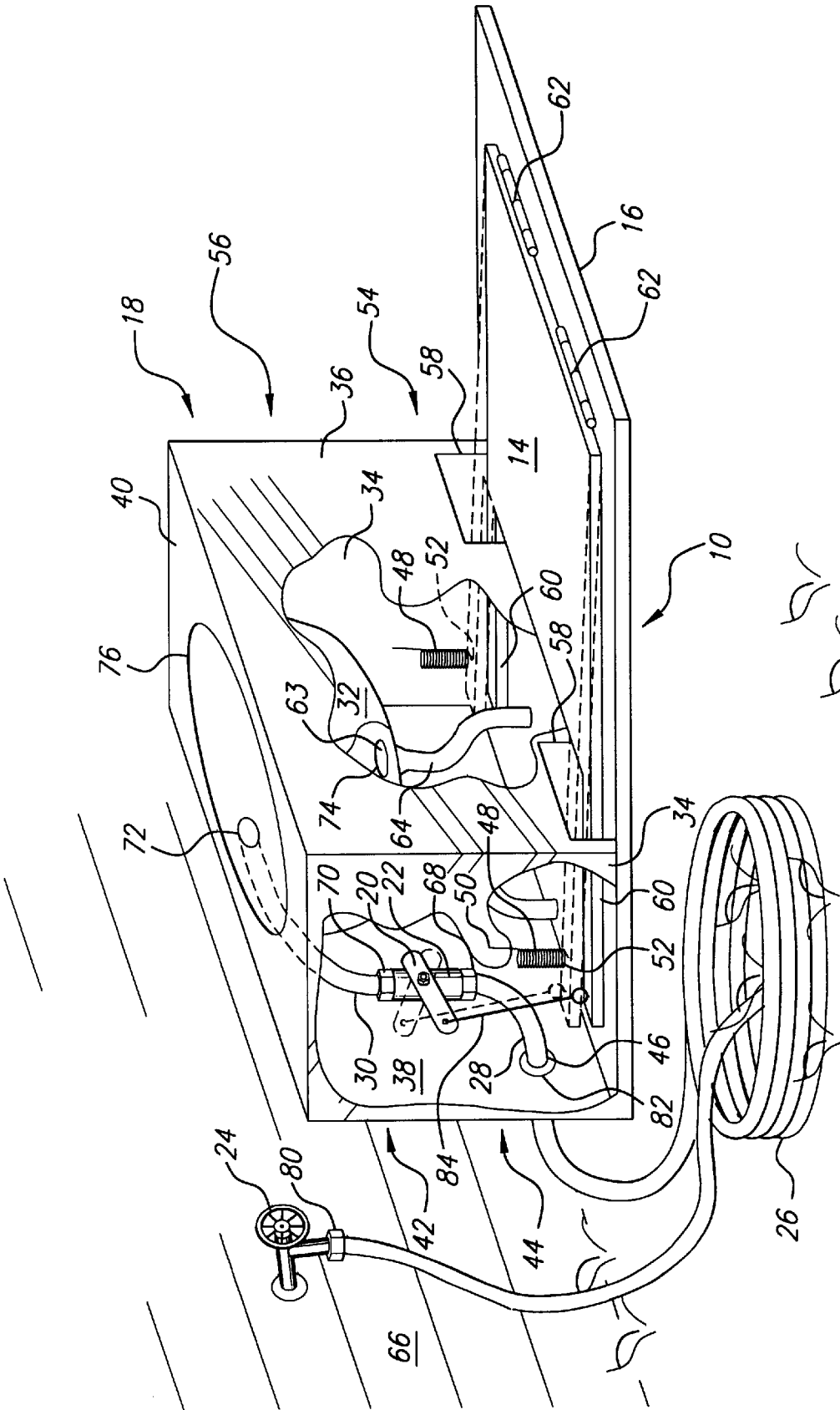


FIG. 2

PET WATERING FOUNTAIN**CROSS-REFERENCE TO RELATED APPLICATION**

This application claims the benefit of U.S. Provisional Patent Application Ser. No. 60/162,066, filed Oct. 28, 1999.

BACKGROUND OF THE INVENTION**1. Field of the Invention**

The present invention relates to a pet watering fountain, and more specifically, a pet watering fountain which is activated by the pet stepping on a spring-biased pedal.

2. Description of Related Art

Providing an animal with a constant source of fresh water in the back yard has been the subject matter of patents for many decades. The following patent illustrates an ornamental design of a water dispenser. Des. Pat. No. 374,516, issued to Lillelund on Oct. 8, 1996, describes an automatic water dispenser for animals. The ornamental design for the water dispenser is a double-recessed bowl with a water jug inverted into one of the recesses.

The following patents describes different types of watering devices for both people and animals. U.S. Pat. No. 3,133,524, issued to Perry S. Martin on May 19, 1964, describes an automatic stock watering fountain. The device includes a pipe which extends into the ground to a water riser leading from an underground water main. A control valve determines the amount of water flowing into a bowl which is connected to the above ground pipe.

U.S. Pat. No. 3,197,081, issued to Graham E. Midworth on Jul. 27, 1965, describes a dispenser having a pressure actuated outlet means. The device is operated by hydraulic pressure from a subsidiary unit at a different location. U.S. Pat. No. 3,418,977, issued to James B. Yardley on Dec. 31, 1968, describes a poultry watering device. The device includes a valve body member insertable through a port in a conduit.

U.S. Pat. No. 3,507,255, issued to Maurice B. Allen on Apr. 21, 1970, describes an animal-actuated drinking valve with a float. The device includes a valve assembly comprising substantially two cylindrical body parts which are removably connected to each other. U.S. Pat. No. 3,831,558, issued to Alden O. Forbes on Aug. 27, 1974, describes a water fountain for animals. The device includes a water basin supported by a stanchion. A water conduit is connected to a water source and intake valves. An animal depresses a valve actuator lever disposed within the water basin.

U.S. Pat. No. 3,889,640, issued to George Restall on Jun. 17, 1975, describes an animal operated liquid dispenser. The device includes a body member having an aperture through which liquids flows. The aperture is closed by a valve which is actuated by a spring mounted on the body member. U.S. Pat. No. 4,329,941, issued to Motohiro Niki on May 18, 1982, describes a water dispenser for small animals. The device comprises a casing, a water supply means, a valve for controlling water flow, and a water feed tube. When the valve is nudged and moved at its downstream end, the poppet valve opens to permit water from the water supply means to flow into the feed tube.

U.S. Pat. No. 4,813,378, issued to Alvin K. Lapp on Mar. 21, 1989, describes an animal watering fountain. The device includes intake and shut-off valves which are below ground to prevent freezing of the lines. U.S. Pat. No. 4,633,816, issued to Ove et. al. on Jan. 6, 1987, describes a device for the controlled discharge of a liquid to animals. The device

includes a valve which has an actuated member connected to a main closing valve.

U.S. Pat. No. 5,125,623, issued to Robert Kiedinger on Jun. 30, 1992, describes a tap water control apparatus comprising a single spout of a plumbing system. The spout receives tap water from valves that adjust flow rates from separate lines of hot and cold water utilized by a control valve. U.S. Pat. No. 5,207,182, issued to Moises B. Lorenzana on May 4, 1993, describes an animal watering apparatus. The device includes a central water receiving portion which is surrounded by a funnel-shaped portion designed to return splashed water back to the central portion.

U.S. Pat. No. 5,582,132, issued to Dale J. Morton on Dec. 10, 1996, describes an automatic pet watering device. The device includes a reservoir, a removable water container, a water supply hose, and a valve. The floating valve actuates the water flow when the water level in the reservoir decreases in volume. An ideal pet watering fountain would easily be attachable to an outside hose bib and at the same time incorporate a lengthy garden hose for placing the invention anywhere in the yard.

None of the above inventions and patents, taken either singly or in combination, is seen to describe the instant invention as claimed.

SUMMARY OF THE INVENTION

The pet watering fountain includes a box-shaped housing which comprises two vertical side walls, a front vertical wall, a rear vertical wall, a horizontal floor, and a top horizontal wall. The pet watering fountain also includes a first plumbing pipe (first pipe), a second plumbing pipe (second pipe), a garden hose, a water supplying means, a valve unit, a spring, a bowl, a draining means, and a pedal.

The operation of the pet watering fountain is quite simple. Water is dispensed into the bowl by hydraulic pressure which is actuated by a spring-biased pedal and lever mechanism attached to a valve unit.

Accordingly, it is a principal object of the invention to provide a pet watering fountain that is easily adapted to an outside hose bib.

It is another object of the invention to provide a pet watering device that utilizes a standard flexible garden hose to permit the present invention to be placed at any convenient location in the back yard.

It is a further objection of the invention to provide a pet watering fountain that can be easily dismantled and assembled without any skill or tools for cleaning and repair.

Still another object of the invention is to accommodate the various weights and sizes of animals.

It is an object of the invention to provide improved elements and arrangements thereof a pet watering fountain in an apparatus for the purposes described which is inexpensive, dependable and fully effective in accomplishing its intended purposes.

These and other objects of the present invention will become readily apparent upon further review of the following specification and drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an environmental, perspective view of the pet watering fountain according to the present invention.

FIG. 2 is a perspective view of the pet watering fountain of the present invention.

Similar reference characters denote corresponding features consistently throughout the attached drawings.

DETAILED DESCRIPTION OF THE
PREFERRED EMBODIMENT

The present invention is a pet watering fountain designated as **10** in the drawings. The pet watering fountain **10** includes a box shaped housing, a water supply means, a hose, at least two pipes, a control valve unit (body), a helical or tension spring (spring), a bowl, a draining means, a stopping means for drain, several fastening means, and a pedal.

FIG. 1 illustrates the operation of the pet watering fountain **10**. First, a thirsty dog **12** walks onto the spring-biased pedal **14**. The spring-biased pedal **14** is then lowered to the floor **16** of the housing **18** which actuates a lever **20** on the control valve unit **22**. As a result, water flows from an outside hose bib **24** into a garden hose **26**, through a first pipe **28** into a valve unit **22**, then into a second pipe **30** which fills into an elevated bowl **32**.

FIG. 2 illustrates the operation of the pet watering fountain **10** and how the invention is assembled. The pet watering fountain **10** includes a box-shaped housing **18** which comprises two vertical side walls **34**, a front vertical wall **36**, a rear vertical wall **38**, a horizontal floor **16**, and a top horizontal wall **40**. The rear vertical wall **38** comprising an upper **42** and lower **44** portion. The lower portion **44** of the rear vertical wall **38** includes an opening **46** dimensioned and configured to receive the end of a conventional garden hose **26** and the end of the first plumbing pipe **28**.

The springs **48** have an upper **50** and lower **52** end and is attached to each vertical side wall **34**. The center of each vertical side wall **34** includes an opening dimensioned and configured to receive a fastening means such as a nut, bolt and washer (not shown) for attaching the upper end **50** of the spring **48**. The front vertical wall **36** comprises a lower **54** and upper **56** portion. The lower portion **54** of the front vertical wall **36** includes two openings **58** each dimensioned and configured to receive a flange **60** extension of the pedal **14**. The front vertical wall **36** is detachable from the box-shaped housing **18**.

The center of the top horizontal wall **40** comprises an opening dimensioned and configured to receive a bowl **32**. At least two thirds of one side of the floor **16** of the box-shaped housing **18** extends outwards. The floor **16** comprises an opening dimensioned and configured to receive a hinge means **62** which is also attached to the end of the spring-biased pedal **14**. The floor **16** may contain an opening dimensioned and configured to receive the draining means **64**.

The pet watering fountain **10** also includes a first plumbing pipe **28** (first pipe), a second plumbing pipe **30** (second pipe), a garden hose **26**, a water supplying means (outside hose bib **24**), a valve unit **22**, a spring **48**, a bowl **32**, a draining means (drain **64**), and a pedal **14**. The preferred water supplying means includes an outside hose bib **24** located on the side of a house or barn **66**. The hose **26** is a conventional garden hose. The hose bib **24** will always be turned to the "on" position. The flexibility and length of the garden hose **26** permits the pet watering fountain **10** to be placed at any convenient location in the back yard.

The ends of the first **28** and second **30** pipes are threaded. The valve unit **22** (body) includes an outwardly directed flange **60** referred to as the lever **20**. The inside of the valve unit **22** includes a through passage that extends axially through the valve body **22**. The valve unit **22** is of a conventional type whereby the lever **20** manipulates the flow of water. The valve unit **22** includes a lower **68** and upper **70** opening dimensioned and configured to threadingly receive one of the ends of the first **28** and second **30** pipes.

The bowl **32** comprises an upper side portion, a bottom portion, and two openings **72** and **74**. The bowl **32** includes an outer lip **76** around the upper side portion of the bowl **32** which is slightly larger than the opening in the top horizontal wall **40** in order for the bowl **32** to sit in the opening. One opening is located in the upper side of the bowl **32** which is dimensioned and configured to receive one end of the second pipe **30**. The bottom portion of the bowl **32** has an opening which is dimensioned and configured to receive a draining means **64**. The opening **74** connects to a drain **64** which removes the water or contents after periodic cleaning. The bowl **32** can be made of wood, plastic, or metal.

The draining means **64** can be a hose **26** which is routed through an opening in the floor **16** or through an additional opening in a vertical side wall **34** (not shown). The connections leading to the bowl **32** are generously proportioned so when the valve unit **22** is fully opened, the bowl **32** will fill quickly or when the drain **64** is opened, the bowl **32** will empty quickly. The drain means **64** has a stopping means **63** to prevent the water flowing out of the bowl **32**. The preferred stopping means is a removable plug **63**.

The pet watering fountain **10** components are assembled to promote water flow in the following manner. First, one end of the garden hose **26** is threadingly connected to the threaded portion **80** of the outside hose bib **24** while the other end is threadingly connected to one end of the first pipe **28**. The threaded water-tight connection between the garden hose **26** and the first pipe **28** is attached into the opening **46** in the rear vertical wall **38**. A lock washer **82** may hold the connection within the opening **46**. The other end of the first pipe **28** is threadingly connected to the lower opening **68** of the valve unit **22**.

One end of the second pipe **30** is threadingly attached to the upper opening **70** of the valve unit **22** while the other end is connected to the opening **72** in the side portion of the bowl **32**. The outer lip **76** of the bowl **32** sits on the opening in the top horizontal wall **40**. The end of the draining means **64** is attached to the opening **74** in the bottom portion of the bowl **32** while the other end is attached to an opening in the floor **16**.

The pedal **14** sits above the floor **16** with a major portion of the pedal **14** equaling the shape of the portion of the floor **16** that extends outwards. Two flanges **60** extend along the floor **16** of the housing **18** and into the openings **58** in the lower portion **54** of the front vertical wall **36**. The middle of each flange **60** includes an opening which receives a fastening means such as a nut, bolt, and washer (not shown) for attaching the lower end **52** of the spring **48**. At least one flange **60** includes an opening dimensioned and configured to receive a fastening means such as a nut, bolt, and washer (not shown) for attaching a sturdy wire **84**. The flange **60** connected to the sturdy wire **84** would be located nearest to the valve unit **22**.

One end of the sturdy wire **84** is attached to the end of the flange **60** nearest to the valve unit **22**. The other end of the sturdy wire **84** is attached to the end of a lever **20** which permits manipulation of the control valve unit **22**. When the valve unit **22** is closed which stops the flow of water, the lever **20** is in the up position. When the valve unit **22** is open to start the flow of water, the lever **20** is in the down position. The lower end **52** of each spring **48** is attached by a fastening means such as a nut, bolt, and washer (not shown) to the middle of each flange **60**. The upper end **50** of the spring **48** is attached by a fastening means such as a nut, bolt, and washer (not shown) to the opening in the center of each side vertical wall **34**. All connections where water flows is sealed in a water-tight manner.

The operation of the pet watering fountain 10 is quite simple. Water is dispensed into the bowl 32 by hydraulic pressure which is actuated by a spring-biased pedal 14 and lever mechanism 20 attached to a valve unit 22. First, a thirsty dog walks onto the spring-biased pedal 14. The spring-biased pedal 14 is then lowered to the floor 16 of the housing 18, the sturdy wire 84 attached to the end of the flange 60 pulls the lever 20 in the down position.

As a result, water flows from an outside hose bib 24 into a garden hose 26, through a first pipe 28 into a valve unit 22, then into a second pipe 30 which then fills into an elevated bowl 32 whenever the spring-biased pedal 14 is depressed. When the animal walks off the spring-biased pedal 14, the lever 20 is moved back to its upward position and the water ceases to flow through valve unit 22. When the plug (not shown) in the drain 64 opening is removed, any excess water is drained 64.

The present invention 10 can be adapted to accommodate different sized animals. The spring-biased pedal 14, sturdy wire 48, and lever 20 can be adapted to accommodate the various weights of animals. The present invention 10 could also be easily adapted to accommodate large farm animals, such as cows, horses, hogs, etc. The present invention 10 may be easily dismantled and assembled without any skill or tools for cleaning and repair. The spring 48 being utilized or stretched over long periods of time may lose its ability to fully constrict, therefore the pedal 14 not need to spring back all the way in order for the lever 20 to be in the closed position. Another way to overcome this problem is that in time the springs 48 may have to be replaced.

It is to be understood that the present invention 10 is not limited to the sole embodiment described above, but encompasses any and all embodiments within the scope of the following claims.

We claim:

1. A pet watering fountain connected to a water supplying means, comprising:

- a spring having an upper and lower end, said spring having a fastening means at each of said ends of said spring;
- a box-shaped housing having two vertical side walls, a front vertical wall, a rear vertical wall, a horizontal floor, and a top horizontal wall, said front vertical wall having an upper and lower portion, said lower portion having two openings, said rear vertical wall having an upper and lower portion, said rear vertical wall having an opening dimensioned and configured to receive said lock washer, at least two-thirds of said horizontal floor extending outwards from said box-shaped housing, the center of said top horizontal wall having an opening, each said vertical side wall having an opening dimensioned and configured to receive a fastening means for attaching said end of said spring;

at least two pipes, a first pipe having each end threaded and a second pipe having each end threaded;

- a valve body having at least two openings, each said openings dimensioned and configured to threadingly engage with the threaded end of said first pipe and said second pipe, said valve body including a lever for manipulating the flow of water through said valve body;

a sturdy wire for moving said lever to the upward and downward positions;

a pedal having a major portion of said pedal equaling the shape of the two-third portion of said horizontal floor, said pedal including two flanges extending out the side of said pedal into said box-shape housing through said openings in said lower portion of said front vertical wall, the middle of each said flange having an opening dimensioned and configured to receive said fastening means for the ends of said springs, an end of at least one said flange having an opening dimensioned and configured to receive a fastening means to attach said sturdy wire;

at least one hinge means for attaching said pedal to said horizontal floor, said hinge permitting said pedal when stepped on to move toward said horizontal floor, said hinge permitting said pedal to move upwards by force caused by said springs,

a hose having two ends, one end of said hose threadingly connected to a hose bib, the other end of said hose threadingly connected to the end of said first pipe;

a draining means for quickly removing excess water; and

a detachably mounted bowl having two openings and an outer lip, one opening dimensioned and configured to receive said draining means, one opening dimensioned and configured to receive the end of said second pipe, said outer lip dimensioned and configured to sit in said opening of said top horizontal wall of said box-shape housing.

2. The pet watering fountain connected to a water supplying means in claim 1, wherein said spring is a helical spring.

3. The pet watering fountain connected to a water supplying means in claim 1, wherein said spring is a tension spring.

4. The pet watering fountain connected to a water supplying means in claim 1, wherein each fastening means includes a nut, bolt and washer.

5. The pet watering fountain connected to a water supplying means in claim 1, wherein said hinge means is a conventional hinge.

6. The pet watering fountain connected to a water supplying means in claim 1, wherein draining means is a drain pipe.

7. The pet watering fountain connected to a water supplying means in claim 1, further comprising a stopping means such as a plug for the drain to hold the water in said bowl.

8. The pet watering fountain connected to a water supplying means in claim 1, wherein said hose is a conventional garden hose.

9. The pet watering fountain connected to a water supplying means in claim 1, wherein said front vertical wall is detachable for cleaning and repairing purposes.

10. The pet watering fountain connected to a water supplying means in claim 1, said detachable mounted bowl is constructed from a material selected from the group consisting of wood, plastic, or metal.